

## ABSTRACT OF THE DISCLOSURE

A data storage device preamp circuit includes a write amplifier having an input and an output. A read amplifier has an input and an output. A loopback circuit selectively connects the output of the write amplifier to the output of the read amplifier. A read channel circuit for a data storage device includes a first counter that generates a first count of an attribute of a write signal that is output by the read channel circuit. A second counter generates a second count of the attribute of a read signal that is received by the read channel circuit. A comparator compares the first count and the second count.